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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/623,517 | 07/22/2003 | Takayuki Ishiguro | 240597US90 | 9991 |

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ALEXANDRIA, VA 22314

| EXAMINER |
|---|
| NGUYEN, TU X |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2618 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 11/01/2007 | ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTOL-90A (Rev. 04/07)

| Office Action Summary | Application No. | Applicant(s) |
|---|---|---|
| | 10/623,517 | ISHIGURO ET AL. |
| | Examiner | Art Unit |
| | Tu X. Nguyen | 2618 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>08 August 2007</u>.

2a)☒ This action is **FINAL**.     2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-7,9-18 and 20-26</u> is/are pending in the application.

    4a) Of the above claim(s) <u>8 and 19</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) <u>1-7,9-18 and 20-26</u> are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>22 July 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All  b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

## DETAILED ACTION

### *Response to Amendment*

Applicant's arguments filed 8/8/07 have been fully considered but they are not persuasive.

In response to Applicants argument " As discussed above, the ' 107 patent is directed to a system in which a transmitter counts the number of negative acknowledgement messages received from a receiver over a predetermined observation time window and compares the number of errors to a threshold. Based on the results of the comparison, the transmitter 310 in the '107 system adjusts the transmit power level. However, Applicants respectfully submit that the '107 patent fails to disclose the step of estimating a quality of an uplink control signal by determining whether a base station correctly receives at least of acknowledgement and negative acknowledgment information signals transmitted by the wireless terminal, as recited in amended Claim 2. Rather, the '107 patent merely counts the number of negative acknowledgement signals received from the receiver. The ' 107 patent does not disclose that a determination is made by the receiver as to whether the transmitter correctly received the negative acknowledgement or acknowledgement signals sent by the receiver". The Examiner respectfully disagrees, in order to determine the transmission power, the receiver counts the number of NACK messages, whereas it is known that the number of downlinks equal to the sum of the number of ACKS and NACKS responding from the receiver. Arvelo disclose "Transmitter 310 counts the NACK messages 340 and performs a power control operation" (col.5 lines 37-45).

In response to Applicant argue Arvelo fails to teach "determining whether a base station correctly receives at least one of acknowledgement and negative acknowledgement information signals transmitted by the wireless terminal". The Examiner disagrees, Arvelo teaching Bluetooth is used to form small networks (col.1 lines 30-31), although Arvelo does not particular mention a base station, however, it is consider that Arvelo teaching a transmitter and a receiver is applicable for both a base station and a mobile terminal.

## Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-7, 9-18, 20-23 and 25-26, are rejected under 35 U.S.C. 102(e) as being anticipate by Arvelo (US Patent 7,082,107).

Regarding claim 1, Arvelo discloses a method of deciding a transmit power level carried out by a wireless terminal in a mobile communications system (see col.1 lines 16-20 and fig.4, Arvelo teaching a wireless local area network which is considered include plurality terminals and a base station, the transmitter and receiver throughout the cited reference are applicable for a terminal and a base station) comprising the steps of:

deciding a multiplex number of uplink control signals by counting a multiplex number of downlink signals corresponding thereto (see col.5 lines 4-5); and

deciding a transmit power level according to the decided multiplex number of uplink

control signals (see col.5 lines 17-18).

Regarding claim 2, Arvelo discloses a method of deciding a transmit power level carried

out by a wireless terminal in a mobile communications system comprising the steps of: .

estimating a quality of an uplink control signal by determining whether a base station correctly

received at least one of acknowledgement and negative acknowledgement information signals

transmitted by the wireless terminal (see col.5 lines 37-38); and deciding a transmit power level

according to the estimated quality of the uplink control signal (see col.5 lines 37-38).

Regarding claim 3, Arvelo discloses a method of deciding a transmit power level carried

out by a base station in a mobile communications system (see col.1 lines 16-20 and fig.4,

Arvelo teaching a wireless local area network which is considered include plurality terminals and

a base station, the transmitter and receiver throughout the cited reference are applicable for a

terminal and a base station) comprising the steps of: deciding a multiplex number of uplink

control signals by counting a multiplex number of downlink control signals corresponding thereto

(see col.5 lines 4-5); deciding a transmit power level according to the decided multiplex number

of uplink control signals (see col.5 lines 17-18); and sending the decided transmit power level as

an indication value to a wireless terminal (col.5 lines 19-20).

Regarding claims 4, 17 and 22, Arvelo discloses a method of deciding a transmit power

level carried out by a base station in a mobile communications system (see col.1 lines 16-20

and fig.4, Arvelo teaching a wireless local area network which is considered include plurality

terminals and a base station, the transmitter and receiver throughout the cited reference are

applicable for a terminal and a base station) comprising the steps of: detecting a quality of an

uplink control signal wherein the multiplex number of signals deciding means decides the

multiplex number of uplink control signals according to a multiplex number of downlink control

signals (see col.5 lines 4-5); deciding a transmit power level according to the detected quality of

the uplink control signal (see col.5 lines 17-18); and transmitting to a wireless terminal the

decided transmit power level as an indication value (col.5 lines 19-20).

Regarding claims 5 and 26, Arvelo discloses a mobile communications system (see

col.1 lines 16-20 and fig.4, Arvelo teaching a wireless local area network which is considered

include plurality terminals and a base station, the transmitter and receiver throughout the cited

reference are applicable for a terminal and a base station) comprising a plurality of wireless

terminals and a base station:

wherein the plurality of wireless terminals respectively are configured to estimate a

quality of uplink control signal and to inform degradation of the quality of the uplink control

signals to the base station in a case where one of the respective wireless terminals estimate

the degradation of the quality of the uplink control signals (see col.5 lines 24-25); and

the base station is configured to decide to increase a transmit power level of the uplink

control signals from each of the wireless terminals when the base station received from one of

the wireless terminals an information that the quality of the uplink control signals for informing

an incorrect receipt of the downlink data signals is degraded (see col.5 lines 36-36) and to

decide to decrease the transmit power level of the uplink control signals from each of the

wireless terminals when the base station received from one of the wireless terminals an

information that the quality of the uplink control signals for informing a correct receipt of the

downlink data signals is degraded (see col.5 lines 44-45), and to send an indication value of the

transmit power level to all of the plurality of wireless terminals (col.5 lines 54-55, closed loop control corresponds to indication value to a wireless terminal).

Regarding claims 6 and 11, Arvelo discloses a wireless terminal (see col.1 lines 16-20 and fig.4, Arvelo teaching a wireless local area network which is considered include plurality terminals and a base station, the transmitter and receiver throughout the cited reference are applicable for a terminal and a base station) comprising:

a multiplex number deciding means for deciding a multiplex number of uplink control signals (see col.5 lines 36-37); a transmit power level deciding means for deciding a transmit power level of the uplink control signals according to the multiplex number of uplink control signals decided by the multiplex number deciding means (see col.5 lines 36-37); and a transmit power control means for controlling a transmit power level of the uplink control signals according to the decided transmit power level by the transmit power level deciding means (col.5 lines 54-55, closed loop control corresponds to indication value to a wireless terminal),

wherein the multiplex number deciding means decides the multiplex number of uplink control signals according to a multiplex number of downlink control signals corresponding thereto (see col.5 lines 4-5).

Regarding claims 7, 18 and 23, Arvelo discloses the transmit power level deciding means decides an increment in the transmit power level when the multiplex number of uplink control signals is large (see col.4 lines 1-5), whereas the transmit power level deciding means decides a decrement in the transmit power level when the multiplex number of uplink control signals is small (see fig.1 element 140, 160).

Regarding claims 9, 12-13, Arvelo discloses the signal quality estimation means estimates the quality of the uplink control signal according to the downlink data signal from the base station (see col.5 lines 24-25).

Regarding claims 10, 16, 21 and 25, Arvelo discloses the transmit power level of the uplink control signal is a transmit power level of an uplink control signal for informing an incorrect receipt of a downlink data signal from a base station (see col.5 lines 36-37).

Regarding claim 14, Arvelo discloses the signal quality estimation means decides that the quality of the uplink control signal for informing a correct receipt of the downlink data signal is degraded in a case where the wireless terminal receives the downlink data signal of informing a same message that was previously received after the wireless terminal sent an uplink control signal for informing a correct receipt of the downlink data signal which as previously received (see col.5 lines 20-35).

Regarding claim 15, Arvelo discloses the signal quality estimation means decides that the quality of the uplink control signal for informing an incorrect receipt of the downlink data signal is degraded in a case where the wireless terminal receives the downlink data signal of informing a different message that was previously received after the wireless terminal sent an uplink control signal for informing a correct receipt of the downlink data signal which as previously received (see col.5 lines 20-35).

Regarding claim 20, Arvelo discloses the multiplex number of signals deciding means measures the multiplex number of downlink control signals and decides the multiplex number of uplink control signals according to the measured multiplex number of downlink control signals (see col.5 lines 24-25, "performs the CRC" corresponds to "measured").

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 24 is rejected under 35 U.S.C. 103(a) as being obvious over Arvelo (US Patent

7,082,107) in view of D'amico et al. (US Pub. 2004/0032853).

Regarding claim 24, Arvelo fails to disclosess the signal quality deciding means decides

the quality of the uplink control signal according a bit error rate or a signal-to-noise ratio of at

least one of a portion of informing the correct receipt of the downlink data signal and a blank

portion thereof.

D'amico et al. disclose the signal quality deciding means decides the quality of the

uplink control signal according a bit error rate (see par.043, lines 7-8) or a signal-to-noise ratio

of at least one of a portion of informing the correct receipt of the downlink data signal and a

blank portion thereof. Therefore, It would have been obvious to one of ordinary skill in the art

at the time the invention was made to modify the system of Arvelo with the above teaching of

D'amico et al. in order to determines a bit error rate in accordance with known techniques by

computing a cyclic redundancy check (CRC).
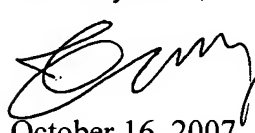
### Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the examiner

should be directed Tu Nguyen whose telephone number is 571-272-7883.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward Urban, can be reached at (571) 272-7899. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 16, 2007